

# ZEROBEAT

1-97

Hampden County Radio Association

Our 51st ARRL Affiliated Year

Issue 5

January 1996

1997

## Next HCRA Meeting REMARKABLE ROVING

Where: Feeding Hills Congregational Church

When: Friday, January 3, 1996

REMARKABLE: *adj. noteworthy, notable, extraordinary, striking, unusual, singular, uncommon.* See UNCONFORMITY, WONDER

COME JOIN US ON FRIDAY and hear Stan, KA1ZE explain the **fun** you can have on the road as a rover. As with any aspect of Amateur radio he has participated in, Stan always finds a way to make it enjoyable, and roving is no exception. With any luck, he'll have his Super Roving Vehicle with him and you will be able to see a compact (!!!) yet well laid out roving setup. If you have ever thought of either roving during a contest, or would like to get some practical first-hand information about mobile/rover installations, then make it a point to come to our January meeting!

## *HAPPY NEW YEAR!*

BEST WISHES FOR A HAPPY, HEALTHY  
AND PROSPEROUS NEW YEAR FROM THE  
HAMPDEN COUNTY RADIO ASSOCIATION!

## NO MORE RENEWAL REMINDERS FROM THE FCC

Tie that ribbon around your finger! The FCC will no longer be notifying hams that their licenses will expire in 90 days. The last notices the FCC issued cover into February of 1997 (with no specific date in February available).

Previously, form 610R was sent to remind Amateurs to renew. Now, we must take the initiative to renew our license for another 10 years and file a Form 610.

A spokesman for the FCC has said, however, that the Commission hopes to have a Form 610 available on the World Wide Web soon to permit on-line renewals.

## THE BOY AND THE FROG

A boy was crossing a road one day when a frog called out to him, "Kiss me and I'll turn into a beautiful princess."

The boy picked up the frog and put it in his pocket.

The frog said, "If you kiss me, I'll turn into a beautiful princess, and I'll stay with you for a week."

The boy took out the frog, smiled at it and returned it to the pocket.

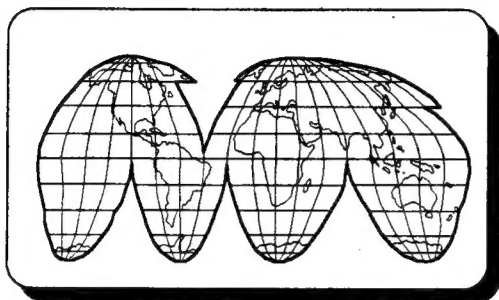
The frog cried, "If you kiss me and turn me back into a princess, I'll stay with you forever, and do anything you want!"



Again, the boy took out the frog, smiled at it, and put it back. After a long pause, the frog asked, "What is it? Why won't you kiss me?"

The boy answered, "Look, I'm an amateur radio operator. I don't have time for girlfriends, but a talking frog - hey, that's cool!"

-From the *ARNS Bulletin*, October 1996.



## Don't Forget.....

### December 28 - 29 RAC WINTER CONTEST

Sponsored by the Radio Club of Canada. Need Prince Edward Island for your IOTA? Then see December QST for details!

- December 31 ARRL Straight Key Night  
January 4 - 5 ARRL RTTY Roundup  
January 10 - 12 Japan International DX CW Contest (Low Band)  
Jan. 11-12, 18-19 1997 North American QSO Party (CW, 11-12; SSB, 18-19)  
January 19 HA (Hungarian) DX Contest  
January 18-20 ARRL VHF Sweepstakes

See December QST for information and rules for any of the above activities.

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## Editor's Message

I hope everyone has had a healthy, happy holiday season, and wish you and your family a happy, healthy, prosperous New Year.

As we round into the last half of our 52nd year we continue to face challenges from previous years. Meeting attendance is down and few if any new faces show up at our meetings. Whether this is a result of a lack of interest in Amateur Radio, a decline of activity due to the sunspot cycle (although there always seems to be activity on the local swap net), or a lack of interesting subject matter at meetings, the Board of Directors has not been able to determine. The Board is interested in giving the members the type of programs you are looking for. So, the next time you see a Board member (or me) at a meeting, let us know what you would like to see. If you have an idea for a group project, or perhaps an informal "day out" with club members, let us know.

Looking forward to seeing everyone this Friday.  
Until next time,

73,

Barry, N1IJK

## TECH TIPS

The ideas and suggestions contributed to **TECH TIPS** by readers have not been tested by **ZERO BEAT** or by the HCRA and no guarantee of operating success is implied. Always use your best judgment before modifying any electronic equipment or item from the manufacturer's original specifications, and always use all appropriate safety precautions. No responsibility is implied by **Zero Beat**, the H.C.R.A., the editors of **Zero Beat**, or the contributors. Send any tips or correspondence with your name, call, address, and telephone number (required for publication of your tip or response to a tip) to:

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WE'RE WAITING FOR YOU TO SEND #4 IN!  
TO BARRY FOR PUBLICATION IN  
ZERO BEAT !

## FOR SALE OR SWAP

NOTHING THIS MONTH - CONTACT  
BARRY TO LIST YOUR EQUIPMENT FREE!



# A 5 ELEMENT WIDE SPACED 6 METER YAGI

by: Fred Stefanik, N1DPM

Last month I helped 2 friends back on VHF. W1QWJ, Dick in FN32 Southern N.H. is now on 6 meters with 100 watts and a 7 element KLM. When I put it up with another friend of mine, John, N1MUW, we first had to remove a 5 element 24' Boom Hygain 10 meter yagi. Dick said thanks for all the help and help yourself to the 10 meter yagi. We did! And so we dragged it back to my QTH.

John was about to close on his first home ever and having been off the bands for a few years and having damaged antennas (they fell down at his apartment and the landlord wasn't real happy) we had to start to assemble an arsenal of aluminum so the first order of business for the new homeowner, (not having even moved in yet) was of coarse a tower and VHF / UHF arrays. Well needing a good 6 meter yagi and being frugal, we couldn't pass up taking the computer and the tubing cutter to the old Hygain. So we went to work.

Using a combination of Yagimax, Antenna Model, Taper, and a haipin match program what we came up with looks like this.

ELEMENT	UNCORRECTED LENGTH	CORRECTED LENGTH	SPACING FROM REFLECTOR	UNCORRECTED ELEMENT DIA.
REFLECTOR	114"	117.664"	0	.625"
DRIVEN	109.25"	112.552"	54"	.625"
DIRECTOR # 1	105.5"	108.688"	108"	.625"
DIRECTOR # 2	102"	104.812"	198"	.625"
DIRECTOR # 3	99"	101.560"	291.5"	.625"

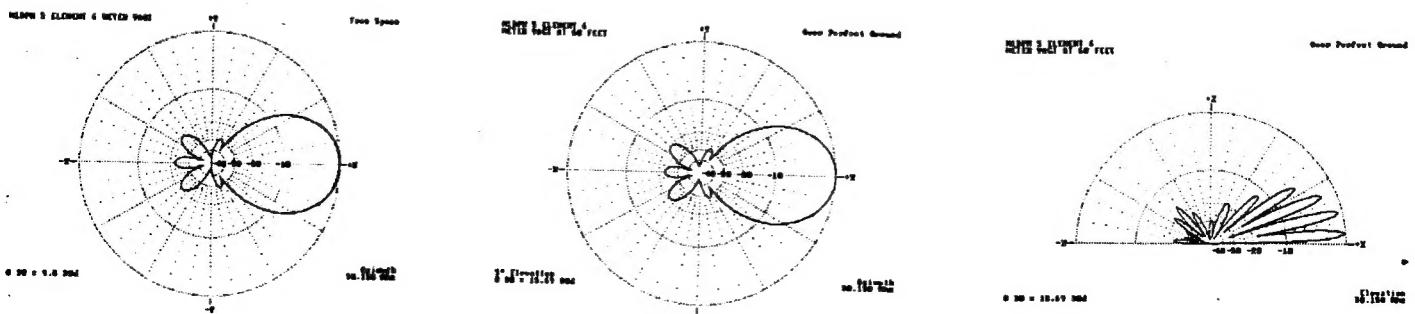
The necessary modifications to the element tubing are as follows:

1. Cut the .875" dia tubing used on the reflector to match the length of all of the other elements.
2. Insert the .625" dia sections so the exposed length is 20.875" each side on all of the elements.
3. Make up the remaining element length with the .438" dia tubing. If you plan you'll have plenty extra!

The match is a simple hairpin and the feed point is accomplished by splitting the coax to feed each side of the driven element. We used a multi-turn choke made of RG-8U for decoupling but a current (ferite bead over the coax) 1:1 balun is probably a better choice. This probably isn't really too critical. The match was then adjusted with a SWR meter, and a return loss bridge. I found that with the hairpin rods that parallel the boom that 12" long allowed plenty of adjustment. The shorting bar ended up to be 4.625" back from the driven element for best match. Your dimentions may be slightly different depending on the balun and wires used, so adjust the match and driven element length for best SWR. With the match adjusted the 1.5:1 SWR points were 49.8 MHz and 50.5 MHz, with the center at 50.175 and a SWR of 1.01:1.

On the computer this antenna show a nice clean pattern with almost 10 dBD gain in free space, and a F/B ratio of 22 dB. In real action the antenna has very good side rejection, a nice clean pattern and over 20dB front to back. In addition, with it's 2" heavy duty boom and HF size elements this "tank" should hold up nicely to those wonderful southern New England ice storms.

If you like playing with antennas this is a pretty good way of getting a nice yagi for 6 meters. As far as the materials go, this antenna is a great 25 foot boom heavy duty building block. It currently sells for approximately \$200.00. This is less than the A50-6 Cushcraft yagi. Or you mat be able to scrounge one from someone that doesn't want it anymore! Look for John, N1MUW on 6, 2, 222, 432, and 1296 to see how it sounds.





## **January ARRL VHF Sweepstakes**

With the holiday season just behind us, it's back to the old grind. What's around the corner in the new year?? Well there's the Superbowl for football fans, the Daytona 500 for the Nascar fans, but before we get to either of those, there's the ARRL VHF Sweepstakes. This is the only VHF / UHF operating event that has the club competition involved. Since the first VHF Sweepstakes the HCRA has only been absent from a few, and from a general interest club that's an awesome record in itself.

***What's needed to operate in the contest?*** Any radio or radios on 6 meters or higher in frequency, and some time. You may use SSB, CW, or FM to make contacts. There usually is a lot of local activity so you don't need a superstation to get on and have some fun. Some of the fun in operating a contest isn't just the competition. In fact there's a number of stations that get on in the VHF contests because this is when they know there will be a lot of activity. And let's face it, without activity we wouldn't be able to do what we all got interested in the ham radio hobby for, and that is to talk to other hams with our equipment. Isn't this a perfect opportunity!?! Better yet, because it's VHF and above, the communications are typically over short distances, so you not only get to talk to other hams, you get to talk to ones that you already know!

***When should you get on?*** Well the contest this year is on the weekend of January 18<sup>th</sup> and 19<sup>th</sup>, and runs from 2 PM local time on Saturday afternoon, until 11 PM local time Sunday night. You can certainly get on anytime during that period, but if your time is limited you should consider getting on either Saturday evening between 7 PM and 10 PM or Sunday morning between 7 AM and Noon. This is when there seems to be an abundance of activity. Of course you should get on whenever you are able to.

***What is the exchange used?*** The exchange for making a contact is calls and grid squares. If you are unsure of your grid square it's a good bet that if you are in Connecticut you're in FN31, and if you're in Massachusetts you're in FN32.

***How do I send my entry in for the HCRA?*** The only thing that you need to do is to submit your log and score sheet with Hampden County Radio Association written in on the entry form for club affiliation.

***Where do I get the forms I need to submit my score?*** All of the details are in the December issue of QST on page 106. The scoring information and ways to obtain the proper forms are listed.

***Can I get on and make contacts without submitting a score?*** Absolutely! But without your score the HCRA will not do as well vs. other clubs. By all means at least get on!

**Hope everyone has a great holiday, and see you in the contest!!!**



1-97

**JANUARY MEETING:**

**REMARKABLE ROVING**  
**with Stan, KA1ZE**

**JANUARY 3, 1997 - 8:00 p.m.**

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Editor: Barry M. Mason N1IJK

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